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RECOMMENDATION

David Morrison

Mr. Morrison has had fairly extensive experience for a graduate student, both in optical astronomy (at the Naval Research Laboratory, and at Harvard's 61" telescope), and in radio astronomy (at the Jet Propulsion Laboratory's Goldstone facilities and at the Haystack radio telescope of Lincoln Laboratory). He has been heavily involved in the design, construction, and testing of the infrared planetary camera, in the development of new hypersensitization techniques for Z plates, and in the development of computer programs for the analysis of the data expected from this camera. He has recently made significant progress in the reduction of previously unreduced 8 - 13 radiometry of Mars, as obtained by William Sinton at the 200" Hale telescope. The reduced data are then being compared with the expected Martian surface temperatures, computed by Mr. Morrison using a program which involves the eccentricity and obliquity of Mars, the variation of albedo over its surface, and the solution of the one-dimensional heat conduction equation. The results bear on the thermal properties and particle sizes of the Martian surface, on the subsurface environment, on the polar and nighttime temperatures, and on

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the possibility that the polar caps are condensed carbon dioxide. Morrison is working on a similar program for the planet Mercury. He has a diverse range of interests and competences, both observational and theoretical, and I anticipate that in future years he will be able to generate, and capably carry out astronomical research problems of some originality and significance. He has also exhibited some facility in teaching.

Carl Sagan,
Faculty Adviser
to David Morrison